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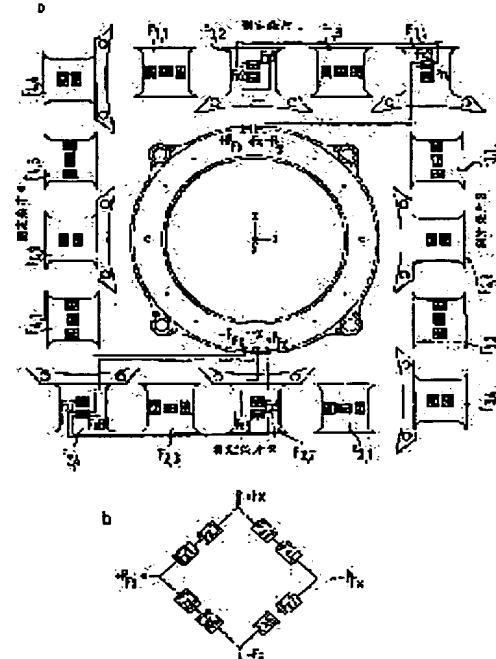
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## (54) WHEEL MEASURING HUB

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To obtain a wheel measuring hub by which all forces and all moments can be detected precisely without being influenced mutually and by which especially the speed of rotation of a wheel can be detected with high resolution by a method wherein strain gages are arranged, directed and connected in such a way that all the forces and all the moments can be detected via a shear stress generated when a load is applied.

**SOLUTION:** When a longitudinal force  $F_x$  is detected, eight strain gages are installed at the front and the rear of a measuring stripe piece 1 and a measuring stripe piece 2. When a wheel support force  $F_z$  is measured, eight strain gages are installed at the front and the rear of a measuring stripe piece 3 and a measuring stripe piece 4. When a side force  $F_y$  is measured, 16 strain gages are bonded to the left side and the right side in central parts of all measuring stripe pieces. When the signal of a camber moment  $M_x$  is recorded, the measuring stripe pieces 1, 2 are used. Four strain gages are connected respectively to the left side and the right side of them, the measuring stripe pieces 3, 4 are applied to the measurement of a restoring moment  $M_z$ , and the signal of a braking and driving moment  $M_y$  is detected by 16 strain gages which are bonded to the front and the rear of all the measuring stripe pieces. The strain gages constitute respectively a Wheatstone bridge so as to stop a cross talk.



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